C. Amendment to the Specification

Please amend the paragraph on page 8, lines 3-17, as follows:

--Now, a case is considered as an example, wherein SiO_2 is used as a substrate, the period W is 2.80 micron, the depth is 427 nm, and the used wavelength is 248 nm. Where an idealistic blazed shape such as shown in Figure 12A is produced, the diffraction efficiency according to the RCWT (Rigorous Coupled Wave Theory) ~~WCRT~~ theory, including the loss due to reflection, is 88.57%. On the other hand, where a deviation in incorrect shape (Figure 12B) from the ideal ~~idealistic~~ shape (Figure 12A) is expressed by x and y, and when x = y = 200 nm, the diffraction efficiency with reflection being taken into account is 78.05%. This corresponds to a decrease of 10.52%. According to actual measurements and simulations made by the inventors, similar results were obtained.--

Please amend the paragraph on page 26, lines 12-20, as follows:

--As described, by forming the first mask by using two types of materials, the shape can be continuous and no error is produced. After the processing region is determined by the aluminum film 8, similar processes as the first mask is defined by use of the chromium film 2 ~~film 8~~ are repeated, whereby a blazed shape is defined between the aluminum film 8 portions. Finally, the aluminum film 8 is removed, whereby a desired blazed grating is produced.--

Please amend the paragraph on page 31, line 17 - page 32, line 1, as follows:

--In consideration of the above, if in this embodiment a small blaze angle is to be produced, as shown in Fig. 4B, a glass member of wedge shape 12 may be intimately brought into contact with ~~contacted to~~ the bottom face of the quartz substrate, such that the exposure light is incident through the wedge shaped member 12. The apical angle of the wedge shaped member may be set so that the surface becomes approximately perpendicular to the exposure light ray impinging thereon. The apical angle of the wedge can be determined easily, and it corresponds to the reminder of subtracting the blaze angle from 90 degrees.--

Please amend the paragraph 32, lines 4-16, as follows:

--Figs. 6A-6F are schematic and sectional views for explaining manufacturing processes of right triangular blazed shape diffractive optical element, in which wall-like protrusions are formed at a desired period. In the first step shown in Fig. 6A, a positive resist 16 is applied onto a quartz substrate 10 and, after that, at the second stop shown in Fig. 6B, a stepper with exposure light of 248 nm wavelength as well as a phase shift reticle are used to produce a resist pattern 17 ~~pattern 12~~ of a width 100 nm, at a desired position corresponding to the vertical portion of a diffraction pattern of blazed shape, comprising a right triangular shape.--

Please amend the paragraph on page 34, lines 3-9, as follows:

--Here, the RIE etching condition used in the fifth step (Fig. 6E) is adjusted go to at the selection ratio ~~ration~~ of the quartz (substrate material) and the resist becomes equal to 1.0, and the shape comprising the protrusion 13 and the resist pattern 14 determined at the fourth step (Fig. 6D) is directly transferred to the substrate 10.--

Please amend the paragraph on page 40, lines 14-27, as follows:

--Figure 9 is a sectional view of a diffractive optical element according to an eighth embodiment. A substrate 65 has a structure with a right triangular blazed shape, having been produced in accordance with the fifth or sixth embodiment. The substrate 65 is used as a mold, and in accordance with a reproduction method such as an injection method or a 2P (Photo-Polymer) [[ZP]] method, using photo-setting resin or the like, a diffractive optical element 66 is produced as a replica. In this manner, an irregular period diffractive optical element having a high-precision right triangular shape blazed structure, including only a very small shape error with respect to an idealistic shape, can be accomplished.--

Please amend the paragraph on page 41, lines 10-20, as follows:

--The diffractive optical element 72 cooperates with the ordinary lens system 71 to correct ~~perform correction of~~ various aberrations of the optical system, such as chromatic aberration or Seidel's five aberrations, for example. Such a projection optical system may be used in various cameras, an interchanging lens system for a single reflex camera, office machines such as copying ~~coping~~ machines, projection exposure apparatuses

for production of liquid crystal panels, and projection exposure apparatuses for production of semiconductor chips such as IC or LSI, for example.--